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# How To Install Spiral Gutters With Double-Headed Nails

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E. L. Demmon, Director

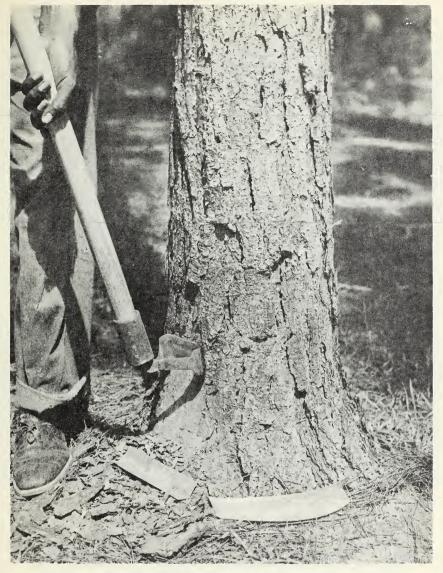
U. S. Department of Agriculture - Forest Service

## HOW TO INSTALL SPIRAL GUTTERS WITH DOUBLE-HEADED NAILS

By Ralph W. Clements

Spiral gutters attached with double-headed nails, not only increase the yield of gum, but are easily installed, readily removed, and do not damage the tree. The spiral gutter is designed to fit a bark-chipped face and eliminates the difficult problem of fitting a straight gutter to a curved surface. Double-headed nails can be pulled easily without damaging the gutters. So the same gutters and nails can be used for a virgin installation and the successive raises on a face. After turpentining is completed, the gutters and nails can be removed. The butt log of the tree then will be free of metal and the tree can be sold at full stumpage value without a deduction for a jump butt. Another very important advantage is the greater gum yield obtained wherever this nail-on installation is used in place of tins inserted into broad-axe cuts. Tests on commercial operations have shown that the new installation is economically sound.

Length of Gutters to Use—Use 10-inch spiral gutters for trees 9 to 12 inches in diameter at breast height. For trees 12 to 16 inches in diameter, use 12-inch spirals. For an apron, use a 7- to 8-inch straight gutter with either length of spiral gutter. Full face width equal to the diameter of the tree can be obtained with gutters of these lengths when installed according to these instructions.



STEP 1. SHAVING THE BARK

Shave off the rough bark using a double-edge shove-down scrape iron with a 4-foot handle. Shave the entire area where the tins will be nailed and the cup will be set. Be sure that sufficient bark is removed to get rid of the deep cracks and leave a smooth surface, especially where the shoulder nails will be driven.



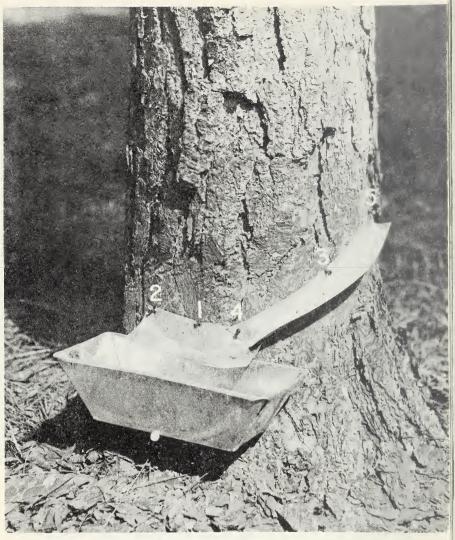
#### STEP 2. ATTACHING THE APRON

For an apron use a 7- to 8-inch straight gutter. Drive the first nail at the middle of the apron. Level the apron and drive the second nail in the left-hand side. Set this nail close to the end of the tin to get full face width. Pound the inner lip of the right-hand end of the apron so that it fits snugly against the tree. Do not nail the right-hand end at this stage.



### STEP 3. ATTACHING THE SPIRAL GUTTER

Lap the lower end of the spiral gutter over the righthand end of the apron. Set the angle of the spiral between 30 and 40 degrees—around 30 for slash pine and steeper for longleaf pine. Drive the first nail in the middle of the spiral gutter. Drive the next nail through both the spiral gutter and the apron at the overlap, and the last nail near the upper end of the spiral gutter. Close any gaps between the gutter and the bark by pounding the inner edge of the gutter into the bark.



STEP 4. COMPLETED INSTALLATION

This installation of a 7-inch apron and a 10-inch spiral gutter requires only 5 double-headed nails. The nails are numbered on the photograph to show the order in which they are driven. When using a 12-inch spiral gutter on larger trees, an extra nail is sometimes necessary. Use a 20d nail to support a 1-quart cup, or a 30d nail for a large 2-quart cup.

#### ADDITIONAL HINTS

The laborer who shaves the bark is the key man for this new method of installing gutters. A good smooth seat on the bark is necessary for obtaining speed and a good fit during the job of nailing the tins. A little extra time can be well spent in training a man to do a fast, thorough job of bark shaving. Follow up with good supervision.

Do not cut to the wood when shaving the bark. Patches of exposed wood will cause leakage behind the gutter.

Do not use short pieces of gutters for aprons, because they will not hold the cup level and they will not permit full face width.

Drive all nails close to the top (inner) edge of the tins. This edge must fit tightly against the tree to prevent leaks.

Laborers who are inexperienced with double-headed nails may drive the lower head all the way through the tin. When this happens, the tin must be replaced. A little training may be necessary to show the men where to stop in driving double-headed nails.

These instructions, except for those on shaving the bark, apply equally well for attaching spiral gutters at an elevated position on the face.

For clay cups or Birdseye cups, use a 10-inch straight gutter in place of the apron to lead the gum into the cup. Set this "lead" gutter at about a 45-degree angle.

